RAKHMANOV, V.A., prof.; PRORVICH, L.V., kand.med.nauk; BORISOVA, T.S.

Local application of corticosteroids in the treatment of certain dermatoses. Vest.derm.i ven. 34 no.10:30-35 '60.
(MIRA 13:11)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof. V.A. Rakhmanov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova. 2. Chlen-korrespondent AMN SSSR (for Rakhmanov).
(STEROIDS--THERAPEUTIC USE) (SKIN--DISEASES)

BORISOVA, T.S.

Third All-Union Scientific and Technical Conference of Diffusion Bonding in a Vacuum. Avtom. svar. 17 no.10:95-96 O '64 (MIRA 18:1)

L 02272-67 EWT(m)/T DS

ACC NR: AP6025253 SOURCE CODE: UR/0057/55/036/007/1251/1258

AUTHOR: Brichkin,A.V.; Bolotov,A.V.; Borisova,T.V.

41
B

ORG: none

TITLE: On the dynamics of the cathode and anode spots of an electric arc

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 7, 1251-1258

TOPIC TAGS: electric arc, arc property, cathode, anode, copper, cathode spot, anode spot

ABSTRACT: A large part of this paper is devoted to a mainly qualitative discussion of the growth and motion of cathode and anode spots in electric arcs. The electrode spots increase in diameter less rapidly than does the discharge channel; the authors feel that the reason for this behavior is to be found in the thermal inertia of the electrode material and its temperature and electron emission characteristics. The qualities whose possible influence on the dynamics of electrode spots is discussed include the thermal flux in the spot, the electrode temperature, the heat conductivity, the electrodynamic repulsion of autonomous cathode spots, the boiling point of the cathode material, the heat capacity of the cathode, the latent heats of fusion and vaporization and the temperature dependence of the electron emission within the cathode spot. The last factor accounts for gross differences in the behavior of cathode spots on electrodes of different materials. The high motility of the cathode spot on a copper

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L 02272-67

ACC NR: AP6025253

electrode is ascribed to a decrease in electron emission at high temperatures, owing to destruction of the oxide surface layer. Experiments were performed with arcs between concentric copper rings and between plane electrodes that were variously heated or cooled. The arc wandered in the annular space between the ring electrodes the more rapidly, the higher the electrode temperature (up to 500 or 700° C) and the shorter the gap. The cathode spot executed chaotic motions about its mean position and left no perceptible track; the anode spot moved more evenly and left a trail of molten electrode material. The current density in the anode spot decreased rapidly with increasing electrode temperature; that in the cathode spot was much less temperature dependent. It is concluded that from the discussion in this paper one can estimate the velocity with which the electrode spots must be made to move and devise means for realizing that velocity; that the current density in the anode spot on a copper electrode depends strongly on the electrode temperature, decreasing from 4.16×10^4 to 6.19×10^2 A/cm^2 as the temperature increases from 16 to 500° C, whereas the current density in the cathode spot depends but little on the temperature; and that the cathode spot has a tendency to move under the influence of the magnetic field of the current in the electrode. Orig. art. has: 5 formulas and 7 figures.

SUB CODE: 20 / 09 / SUBM DATE: 24May65 ORIG. REF: 010 OTH REF: 001

Card 2/2 vmb

BORISOVA, V

BORISOVA, V.

Techniques of correct breathing. IUn. tekh. 2 no.2:73-75 F '58.
(Respiration) (MIRA 11:2)

BORISOVA, V., kulinar

Decisions of the culinary council are being carried out. Obshchestv. pit. no.12:8 D '60. (MIRA 13:12)

1. Otdel rabochego snabzheniya Saratovskogo otdeleniya Privolzhskoy zheleznoy dorogi.
(Saratov—Cookery (Vegetables))

BORISOVA, V.

Borisova, V. - "History of the optical production in Russia," Trudy Studench. nauch.-tekhn. o-va (Moscow technical college im. Bauman), 2, 1949, p. 9-16

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

BORISOVA, V.

Cinemascope. p. 22. Is grounding of radio receivers obligatory? p. 24.

RADIO. Vol. 5, no. 1, 1956

Sofiia, Bulgaria

SOURCE: East European Accessions List (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

PAZHITNOVA, N.P.; BORISOVA, V.A.

Products of secondary recovery as raw materials for pyrolysis. Trudy MINKHiGP no.28:126-133 '60. (MIRA 14:4)
(Petroleum products) (Pyrolysis)

BORISOVA, V.A., inzh.

Using new shiny copper and nickel electrolytes in automatic three-layer electroplating. Mashinostroenie no. 2:62-65 Mr-Ap '64. (MIRA 17:5)

BORISOVA, V.A.

Introducing automatic machinery for electroplating in three layers. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.2:29-30 F '65.
(MIRA 18:5)

BORISOVA, V.D. Prinimali uchastiye: BATURINA, Ye.A.; PESHKOVA, F.G.; ALENTOV, Ye.P.; LEVUSHKINA, V.Ye.; PETROVA, N.I.; SAHLINA, O.F.; SLYADNEV, A.P.; TEVEROVSKAYA, Kh.A.; CHIZHIKOVA, N.M. SHPAKOVSKAYA, L.I., red.; POTOTSKAYA, N.M., tekhn.red.

[Districts of Novosibirsk Province; physicogeographical features] Raiony Novosibirskoi oblasti; prirodno-ekonomicheskaia kharakteristika. Novosibirsk, Novosibirskoe knizhnoe izd-vo, 1959. 367 p. (MIRA 13:9)

(Novosibirsk Province--Economic geography)

BORISOVA, V. F.

37421. Vitamin C v Kul'turnykh Yagodakh Gorno-Altayska. Sbornik Rabot Po Voprosam Gigiyeny Pitaniya. Novosibirsk, 1949, s. 117-27.-- Bibliogr: 12 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

OVCHARENKO, V.Ye., inzh.; BORISOVA, V.F., inzh.

Evaluation of oil characteristics in oil containing materials. Masl.-zhir.prom. 28 no.12:6-9 D '62. (MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut maslozhirovoy promyshlennosti.

(Oils and fats)

Borisova, V. G.

FIGUROVSKIY, N.A., professor; BORISOVA, V.G.

Qualitative analysis of pharmaceuticals from crystalline evaporation layers. Apt.delo 6 no.5:46-51 S-O '57. (MIRA 10:11)

1. Iz TSentral'nogo nauchno-issledovatel'skogo aptechnogo instituta Ministerstva zdravookhraneniya SSSR.
(DRUGS--ADULTERATION AND ANALYSIS)

VARLAMOV, R.G.; BORISOVA, V.G., red.; NOVOSEL'TSEVA, O.N., otv. red.; SOKOLOVA, Ye.V., tekhn. red.

[Simple transistorized receivers] Prosteishie priemniki na poluprovodnikakh. Moskva, Izd-vo "Detskii mir," 1961. 1 fold. l. (Prilozhenie k zhurnalu "IUnyi tekhnik," no.10(100))
(MIRA 14:5)

1. TSentral'naya stantsiya yunikh tekhnikov, Moscow.
(Transistor radios)

L 34099-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/HW/GD

ACC NR: AT6013830 SOURCE CODE: UR/0000/65/000/000/0035/0043

13
12
B+1

AUTHOR: Borisova, V. I.; Dekhtyar, I. Ya.; Madatova, E. G.

ORG: Institute of Metal Physics, AN UkrSSR (Institut metallofiziki AN UkrSSR)

TITLE: Change of the magnetic properties of nickel during cyclic thermomagnetic treatment

SOURCE: AN UkrSSR. Issledovaniye nesovershenstv kristallicheskogo stroyeniya (Study of imperfections in crystal structure). Kiev, Naukova dumka, 1965, 35-43

TOPIC TAGS: nickel, thermomagnetic effect, magnetostriction, thermal stress, magnetization, magnetic permeability, magnetic coercive force

ABSTRACT: The effect of cyclic thermal treatment in a magnetic field on the coercive force, magnetization, and magnetic permeability of nickel was studied for the first time. Vacuum-remelted nickel specimens were vacuum-annealed for 4 hr at 900C to relieve the stresses, then subjected to cyclic thermal treatment (repeated quenchings) at 250—1100C both in the absence of a magnetic field and in the presence of a longitudinal or transverse magnetic field. A 25—30% reduction in the increase of the coercive force was observed after cyclic thermal treatment in the longitudinal field as compared to the same treatment in the absence of a field. A sharp reduction of this kind was also observed in the transverse field. Cyclic thermal treatment was found to cause a decrease in the magnetization and permeability of nickel, this

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ACC NR: AT6013830

being directly related to the data on the reduction in the increase of the coercive force. The effects observed are interpreted in terms of the general aspects of the theory of thermomagnetic treatment. The combined action of magnetostrictive and thermal stresses during the quenching of nickel from temperatures above the Curie point causes a decrease in the number of dislocation sources, and this in turn results in a smaller increase of the coercive force. Orig. art. has: 4 figures, 3 tables, and 5 formulas.

SUB CODE: 11 / SUBM DATE: 23Jul64 / ORIG REF: 006 / OTH REF: 008

Card 2/2 vmb

ACCESSION NR: AT4010696 S/2601/63/000/017/0120/0131

AUTHOR: Borisova, V. I.; Dekhtyar, I. Ya.; Madatova, E. G.; Mikhalenkov, V. S.; Fedchenko, R. G.; Khazanov, M. S.

TITLE: Investigation of the effects of nonstationary heating on the changes in magnetic and electrical properties of heat-resistant alloy ZhS-6K

SOURCE: AN UkrRSR. Insty*tut metalofizy*ky*. Sbornik nauchny*kh trudov. no. 17, 1963. Voprosy* fiziki metallov i metallovedeniya, 120-131

TOPIC TAGS: alloy ZhS-6K, paramagnetic susceptibility, surface electrical resistance, heat treatment, phase transformation, eddy current, heat resistance, magnetism, alloy electrical property, heat resistant alloy

ABSTRACT: Application of new methods to the physical investigation of the phase and structural changes occurring during cyclic heat treatment of heat-resistant materials is very important. One of the methods used in this study is that of paramagnetic susceptibility, by means of which it is possible to determine the interrelationship between structural changes and the states of phases, whether these changes are successive or simultaneous, and to what extent they occur during the process of thermal fatigue. In addition to the above methods the following were also used: changes in thermal rigidity and

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ACCESSION NR: AT4010696

electrical resistance, form changes, and measurement of the surface electrical resistance with determination of losses due to eddy currents. The first task was the investigation of the effects of thermal stress on form changes and hardness of samples of the alloy subjected to cyclic heat treatment. The results obtained showed that the linear dimensions of alloys with high recrystallization temperatures did not change appreciably as a result of thermal cycles. It is interesting to note that after 250 thermocycles with cooling in water, breakage occurred without noticeable change in the length of the samples. Thermal rigidity of samples was measured in a standard VIM-1M apparatus. It was found that the changes in hardness resulting from thermal treatment depend not on thermal stresses but on changes in the fine crystalline structure of the alloys. The dependence of the electrical resistance of the alloy on heat changes during thermal treatment was studied by the potentiometric method using a standard PPTN bridge. It was found that resistance decreases up to 50 thermocycles. The absolute minimum occurs at about 325 cycles after which there is a continuous increase up to 600 cycles. The study of paramagnetic susceptibility showed that during heat treatment there was a continuous decrease in the hard solution of the matrix due to the alloying components. This process should cause a decrease in electrical resistance. The sharp increase after 325 cycles is

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ACCESSION NR: AT4010696

difficult to explain. For the exact explanation of the process involved it is necessary to employ new methods using structural sensitivity characteristics and phase composition. The study of paramagnetic susceptibility demands a thorough study of structural and phase changes occurring during cyclic heat treatment. For measurements of susceptibility a special unit was designed which utilized the compensatory method of measurement. The following conclusions were reached: cyclic heat treatment, with cooling in a stream of air, of thin samples 3 mm in diameter merely leads to acceleration of the aging process. With samples of complicated form a considerable stress gradient developed during heat treatment leading to an unbalanced redistribution of elements. Under these conditions the appearance of cracks is more probable. The study of paramagnetic susceptibility of the alloy showed that for 3mm samples susceptibility increases evenly. No anomalies were observed, a fact which is explained by the almost total absence of a gradient of thermal stresses during cooling. Orig. art. has 5 formulas, 7 figures, and 1 table.

ASSOCIATION: Insty*tut metalofizy*ky* AN UkrRSR (Institute of the Metallurgical Physics of Metals AN Ukr RSR)

SUBMITTED: 00	DATE ACQ: 31Jan 64	ENCL: 00
SUB CODE: MM	NO REF SOV: 001	OTHER: 002

Card 3/3

L 44715-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(z)/EWA(c)/EWP(b) MJW/JD

ACCESSION NR: AT5008873 S/2601/64/000/020/0088/0093

AUTHOR: Borisova, V.I.; Madatova, E.G.

TITLE: Effect of cyclic heat treatment and plastic deformation on the magnetic properties of permalloy

SOURCE: AN UkrSSR. Institut metallofiziki. Sbornik nauchnykh trudov, no. 20, 1964. Voprosy fiziki metallov i metallovedeniya (Problems in the physics of metals and physical metallurgy), 88-93

TOPIC TAGS: permalloy magnetic property, permalloy heat treatment, plastic deformation, permalloy structure, coercive force, alloy magnetization, magnetic permeability

ABSTRACT: The article discusses the effect of cyclic heat treatment (repeated quenching in water from high temperatures) and plastic deformation by torsion on the magnetic properties of permalloy-80. Magnetization curves of the annealed samples were recorded, and the coercive force H_c was measured by the ballistic method. After these tests, the samples were subjected to cyclic heat treatment in the presence and absence of a magnetic field. The latter was found to have no appreciable effect on H_c. The cyclic heat treatment had no effect on the magnetization and initial and maximum permeability

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L 44715-65

ACCESSION NR: AT5008873

of the permalloy, while the residual magnetization changed by only 10%. The effect of plastic deformation by torsion (0, 6, 18, and 60%) on the magnetization, initial permeability, maximum permeability, residual magnetization, and coercive force was studied. The data show that the magnetic characteristics of permalloy-80 are much less sensitive to the presence of crystal structure defects than are those of pure nickel, and hence, a greater stability of these characteristics can be expected in materials of this type. Orig. art. has: 3 figures, 1 table, and 3 formulas.

ASSOCIATION: Institut metallofiziki AN UkrSSR (Institute of the Physics of Metals, AN UkrSSR)

SUBMITTED: 22Apr64 ENCL: 00 SUB CODE: MM, EM

NO REF SOV: 004 OTHER: 004

Card 2/2

BORISOVA, V.L. (Novosibirsk)

Gangrene of the toes in Vasquez's disease. Klin.med.36 no.11 145-146 N'58 (MIRA 11:12)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. -prof. I.L. Bregadze) na baze oblastnoy bol'nitsy Novosibirska (glavnyy vrach zaslyzhenyy vrach RSFSR Z.A. Kireyeva).
(GANGRENE)
(ERYTHREMIA)

BORISOVA, V.L.

Case of foreign body in the free abdominal cavity. Khirurgiia 35 no.10:124-125 O '59. (MIRA 12:12)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. I.L. Bregdaze) na base oblastnoy bol'nitsy Novosibirska (galvnyy vrach - zasluzhenny vrach RSFSR Z.A. Kireyeva).
(ABDOMEN for. bodies)

BORISOVA, V.M.

A case of a dermoid cyst of the bladder. Urologiia 21 no.3:61-62 Jl-S '56. (MIRA 9:12)

1. Iz 1-go khirurgicheskogo otdeleniya (zav. - V.M.Borisova) ob"yedinennoy gorodskoy bol'nitsy Barnaula (glavnyy vrach R.I.Vas'kova.)
(BLADDER, neoplasms
teratoma)
(TERATOMA, case reports
bladder)

BORISOVA, V.M., zasluzhennyy vrach RSFSR

Treatment of urolithiasis in the Altai Territory. Urologiia 23 no.2:25-28 Mr-Ap '58. (MIRA 11:4)

1. Iz Barnaul'skoy gorodskoy bol'nitsy (glavnyy vrach - zasluzhennyy vrach RSFSR R.I.Vas'kova)

(URINARY TRACT, calculi in Russia, statist. (Rus))

BORISOVA, V. M., Cand. Med. Sci., — (diss), "Diagnosis and treatment of urolithic disease (clinico-laboratory investigations)," Barnaul, 1961, 23pp, (Omsk Medical Institute im M. I. Kalinin), 250 copies (KL-Supp 9-61, 188)

BORISOVA, V.M., kand.med.nauk

Changes in the filtration and reabsorptive capacity of the kidneys in patients with urolithiasis. Urologiia no.1: 19-23'63. (MIRA 16:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.I.Neymark) Altayskogo meditsinskogo instituta.
(CALCULI, URINARY) (BLOOD--ANALYSIS AND CHEMISTRY)
(KIDNEY FUNCTION TESTS)

BORISOVA, V.M., kand. med. nauk

Late results of ureterocil-cystoplasty. Urologiia 29 no.1: 50-51 '64. (MIRA 17:8)

1. Klinika fakul'tetskoy khirurgii (zav. - prof. I.I. Neymark) Altayskogo meditsinskogo instituta.

IVANOV, K.K.; KOVALENKOVA, V.K.; DAVYDOVA, T.A.; BORISOVA, V.N. Prinimali uchastiye; SOKOLOVA, L.B.; PROKHOROVA, T.G.; SHATILOVA, Z.K.; PYL'NEVA, L.I.; SEMENOVA, V.S.

Obtaining colimycin on an enriched medium. Med.prom. 14 no.11:13-16 N '60. (MIRA 13:11)

1. Institut po izyskaniu novykh antibiotikov AMN SSSR.
(NEOMYCIN)

BORISOVA, V.N.; GIRSHFEL'D, R.V.; ZAKIN, M.M.; KUZ'MINA, P.A.; MAKAREVICH, M.S.

Use under dispensary conditions of seeding of sputum and tracheal washings for the detection of Mycobacteria tuberculosis. Probl. tub. 38 no.2:66-67 '60. (MIRA 13:11)

1. Iz II-go protivotuberkuleznogo dispansera Moskvy (glavnyy vrach G.V. Kotsubey).
(MYCOBACTERIUM TUBERCULOSIS)

SAMTSEVICH, S.A.; BORISOVA, V.N.

Effect of fertilizers on the rhizosphere microflora of winter wheat. Mikrobiologiia 30 no.6:1033-1041 N-D '61. (MIRA 14:12)

1. Institut zemledeliya Ukrainskoy akademii sel'skokhozyaystvennykh nauk, Kiyev.
(RHIZOSPHERE MICROBIOLOGY) (WHEAT--FERTILIZERS AND MANURES)

MARKHININ, Ye.K.; BASHARINA, L.A.; BORISOV, O.G.; BORISOVA, V.N.; PUGACH, V.B.; TIMERBAYEVA, K.M.; TOKAREV, P.I.

Study of the state of volcanoes of the Klyuchevskaya group and the Sheveluch Volcano in 1958-59. Biul.Vulk.sta. no.31:3-16 '61. (MIRA 15:2)

(Kamchatka--Volcanoes)

TOKAREV, P.I.; BORISOVA, V.N.

Eruption of the Bezymyannyy Volcano in April 1960. Biul.Vulk.sta. no.31:23-27 '61. (MIRA 15:2)
(Bezymyannyy Volcano)

BORISOVA, V.N.; BORISOV, O.G.

Observations inside the Bezymyannyy Volcano crater in the summer of 1960. Biul. Vulk. sta. no.32:14-19 '62. (MIRA 15:10)
(Bezymyannyy Volcano)

BORISOV, O.G.; BORISOVA, V.N.

Repeated heat-up of the agglomerate flow of the Bezymyannyy Volcano, 1959-1960. Soob. DVFAN SSSR no.19:9-13 '63. (MIRA 17:9)

1. Dal'nevostochnyy geologicheskiy institut dal'nevostochnogo filiala Sibirskogo otdeleniya AN SSSR.

VINOGRADOV, V.I.; BORISOVA, V.N.; SYUY YUN-CHAN [Hsü Yung-ch'ang]

Origin of volcanic sulfates. Dokl. AN SSSR 158 no.3:636-637 S '64.
(MIRA 17:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR. Predstavleno akademikom D.S.Korzhinskim.

KRUGLYAK, Ye.B.; BORISOVA, V.N.; BRAZHNIKOVA, M.G.

Chromatographic comparison between olivomycin and some related antibiotics. Antibiotiki 8 no.12:1064-1067 D '63. (MIRA 17:10)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.

BRAZHNIKOVA, M.G.; KRUGLYAK, Ye.B.; BORISOVA, V.N.; POKRAS, L.S.

Isolation, purification and characteristics of the antibiotic 14725 from the ostreogrycin group. Antibiotiki 10 no.1:43-48 Ja '65. (MIRA 18:4)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

MEZENTSEV, A.S.; KRUGLYAK, Ye.B.; BORISOVA, V.N.; FEDOROVA, G.B.; BRAZHNIKOVA, M.G.

Production of some olivomycin derivatives and their physicochemical characteristics. Antibiotiki 10 no.5:410-414 My '65.
(MIRA 18:6)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

BRAZHNIKOVA, M.G.; KRUGLYAK, Ye.B.; BORISOVA, V.N.; FEDOROVA, G.B.

Study of olivomycin homogeneity. Antibiotiki 9 no.2:141-146 F '64. (MIRA 17:12)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR, Moskva.

UKHOLINA, R.S.; KRUGLYAK. Ye.B.; BORISOVA, V.N.; KOVSHAROVA, I.N.; PROSHLYAKOVA, V.V.

Production of antibiotics related to olivomycin by various Actinomyces species. Mikrobiologiia 34 no.1:147-156 Ja-F '65. (MIRA 18:7)

1. Institut po izyskaniyu novykh antibiotikov AMN SSSR.

L 22937-66 EWT(1)/T JK

ACC NR: AP6014829 SOURCE CODE: UR/0297/65/010/001/0043/0048

AUTHOR: Brazhnikova, M. G.; Kruglyak, Ye. B.; Borisova, V. N.; Pokras, L. S. 31 B

ORG: Institute for the Search of New Antibiotics, AMN SSSR, Moscow (Institut po izyskaniyu novykh antibiotikov AMN SSSR)

TITLE: Isolation, purification, and characteristics of the antibiotic 14725 of the group of osterogrysins

SOURCE: Antibiotiki, v. 10, no. 1, 1965, 43-48

TOPIC TAGS: antibiotic, bacteria, chromatography/14725 antibiotic

ABSTRACT: The antibiotic 14725 was isolated from the cultural liquid of Actinomycete 14725 of the Actinomyces Kurssanovi species by extraction with ethyl acetate at a pH of 7.0 to 7.2; the extract was washed with water and concentrated in vacuum; the concentrated solution was treated with petroleum ether which precipitated the antibiotic; the latter was crystallized by a mixture of heated ethyl acetate with benzene (7:3). Chromatography was used for the investigation of the composition of the crystalline antibiotic. A system of chloroform-carbon tetrachloride applied on paper saturated with ethylene glycol indicated that the preparation is composed of three components. Two components are crystalline, soluble in chloroform, ethyl acetate, and ethanol, poorly soluble in benzene, and insoluble in carbon tetrachloride. The third component was not obtained in the form of a homogenous compound. A qualitative

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L 22937-66

ACC NR: AP6014829 O

analysis of the first two components established that the first component contains almost twice as much of N as the second component. With $FeCl_3$ the first component produces a red tint, while the second--a green tint. An investigation of the biological properties of both components revealed that the first component was active in relation to Bacterium subtilis, and the second--against Staphylococcus aureus; in addition both components were found to be synergetically active against Staphylococcus aureus. Data obtained in the investigations established also that antibiotic 14725 is close to a large number of antibiotics known as ostreogrysins. Among them are streptogramin, staphylomycin, antibiotic PA-114, micamycin, and ostreogyrsin. It was found also that the properties of first component of antibiotic 14725 do not differ from those of micamycin, and that the properties of the second component do not differ from those of micamycin A and staphylomycin M-1. Orig. art. has: 3 figures and 3 tables. [JPRS]

SUB CODE: 06 / SUBM DATE: 24Dec63 / ORIG REF: 002 / OTH REF: 013

Card 2/2 10

SAMTSEVICH, S.A.; BORISOVA, V.N.

Toxicity of volatile substances produced by micro-organisms in the soil. Mikrobiologiia 32 no.3:484-491 My-Je '63 (MIRA 17:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya, Kiyev.

KRUGLYAK, Ye. B.; MEZENTSEV, A. S.; BORISOVA, V. N.; FEDOROVA, G. B.; BRAZHNIKOVA, M. G.

"Characterization of some olivomycin derivatives and decomposition products."

report submitted for Antibiotics Cong, Prague, 15-19 Jun 64.

Inst for Search of New Antibiotics, AMS USSR, Moscow.

IVANOV, Boris Nikolayevich; TKALIN, Ivan Mikhaylovich; SOLNTSEV, Vyacheslav Aleksandrovich; SHTRUM, Viktor L'vovich; SHNEYDER, Roman Izrayle-vich; MAYANSKIY, Iosif Isaakovich; BORISOVA, Volya Petrovna; ARUTYU-NOV, V.O., retsenzent; BLEKHSHTEYN, L.I., red.; SOBOLEVA, Ye.M., tekhn.red.

[Technology of the manufacture of electric instruments] Tekhnolo-giia elektropriborostroeniia. Moskva, Gos.energ.izd-vo, 1959. 590 p. (MIRA 13:4)
(Electric apparatus and appliances)

KOZLOVA, V.V.; BORISOVA, V.T.

Maintenance of chromium plated automobile parts. Biul.tekh.-ekon. inform. no.3:16 '61. (MIRA 14:3)
(Automobiles—Maintenance and repair)

Borisova, V. V.

USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds, E-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34889

Author: Ivanov, G. P., Belyanin, V. A., Borisova, V. V.

Institution: None

Title: Effect of Annealing on Hardness of Surface Layer Strengthened by the Electric-Spark Method

Original Periodical: Metallovedeniye i obrabotka metallov, 1955, No 4, 48-51

Abstract: The annealing stability of reinforced layers, obtained on specimens made of 45 steel by electric-spark processing using the IE-2M apparatus was determined (Ivanov, G. P., Vest. Mashinostroyeniya, 1954, No 10). The electrodes used were: hard T15K6 alloy, ferrochrome, ferroboron, tungsten, chromium, and nitrided chromium (4% N). The microhardness of the reinforced layer was determined prior to annealing using metallographic sections and the PMT-3 instrument with a loading of 50 g. The layers having the highest microhardness were those obtained with

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USSR/Solid State Physics - Mechanical Properties of Crystals and Polycrystalline Compounds, E-9

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34889

Abstract: the T15K6-alloy electrodes (1,260 kg/sq mm and those of ferroboron (1,000 kg/sq mm). All specimen were broken up into groups and subjected to-annealing at 300, 500, 700, and 800 degrees for 2 hours. Curves are given for the variation of the microhardness of the layers obtained with various electrodes vs the annealing temperature.

Card 2/2

LAVSKIY, G.K.; BORISOVA, V.V.

Prolonged sleep therapy of hypertension. Klin. med., Moskva 30 no.9: 95-100 Sept 1952. (CIML 23:2)

1. Professor for Lavskiy. 2. Moscow.

LAVSKIY, G.K., professor (Moskva); BORISOVA, V.V. (Moskva); LIKHAREVA, K.O., (Moskva)

Myocardial infarct and capacity for work. Klin.med. 34 no.7:46-50 Jl '56. (MLRA 9:10)

(MYOCARDIAL INFECT, ther.
restoration of work capacity)
(WORK, in various dis.
capacity restoration in myocardial infarct)

Borisova, V.V.

LAVSKIY, G.K.,professor. (Moskva); BORISOVA, V.V. (Moskva) ;
PETROVA, Ye.N. (Moskva)

Changes in the penicillin content of blood, urine and bile.
Klin. med. 35 no.2:80-83 F '57 (MLRA 10:4)

1. Iz bol'nitsy Chetvertogo upravleniya Ministerstva zdravookhraneniya SSSR (nach. upravleniya - prof. A.M. Markov, nauchnyy rukovoditel' - prof. G.K. Lavskiy) i TSentral'noy laboratorii (zav. - prof. P.P. Aver'yanov)
(PENICILLIN, determ.
in blood, urine & bile after admin. of various doses)

BORISOVA, V.V.

LAVSKIY, G.K., prof.; BORISOVA, V.V. (Moskva)

Antibiotic therapy in cholecystitis and angiocholitis. Vrach.delo supplement '57:18 (MIRA 11:3)
(BILIARY TRACT--DISEASES) (ANTIBIOTICS)

BORISOVA, Yo.

Exercises with dumbbells. IUn.tekh. 2 no.3:62-65 Mr '58.(MIRA 11:3)
(Gymnastics)

GURVICH, Leopol'd Il'ich [deceased]; BORISOVA, Ye., red.; SIMAKINA, I., mladshiy red.; MOSKVINA, R., tekhn. red.

[Role of natural resources in the development of productive capacities]Rol' prirodnykh bogatstv v razvitii proizvoditel'nykh sil. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 252 p. (MIRA 14:8)

(Natural resources) (Economic history)

S/107/61/000/010/003/007
D201/D304

AUTHOR: Borisova, Ye., Junior Scientist

TITLE: BESM takes over planning

PERIODICAL: Radio, no. 10, 1961, 23-24

TEXT: The БЭСМ (BESM), a fast electronic computer installed at the Computer Center of the AS USSR, is being used in its new capacity of a planning computer. It operates at a speed of 10,000 operations per second. Lately, mathematical methods have been applied also to the economic field and several problems have been already solved, such as the choice of optimum loading of production installations, distribution of transportation, flow of orders between factories and others. The programming of the machine uses the perforated card system; the output is presented in decimal notation on paper tape by a printer. As an example of the numbers of calculations involved, the problem of optimum loading planning is cited for a factory of small cubic capacity automobiles. The loading had to be evaluated for 13 production machines producing 25 components for bodies. The operation involved 1,000,000

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S/107/61/000/010/003/007
D201/D304

BESM takes over planning

arithmetical operations, and the machine produced an answer for loading such that the total production time of components was considerably shorter than that evaluated by factory methodology specialists. The problem was solved on the BESM by scientific worker U. Malkov, the machine producing the answer in 6 minutes. The machine has been successfully used by structural engineers. From the data supplied by the specialists of НИИМосстрой (NIIMosstroy) the Computer Center has solved the problem of the most rational use of tower cranes in construction work in Moscow. This resulted in a 25% reduction in the number of the cranes used. Interesting results in solving transportation problems were obtained by scientific workers Yu. Oleynik and K. Kim in evaluating optimum transportation utilization between industrial producing and utilization centers such as cement factories and building sites, which resulted in considerable reduction of transportation costs of materials. This permitted the МОСАВТОТРАНС (Mosavtotrans) to reduce its transportation costs by 14 %, i.e., to save 1 million (new) rubles per year. The plan for movements of empty rail-cars was also produced. The same programming was used for planning the transportation of forest products from felling points to the utilization sites of the BSSR, resulting in a saving of

Card 2/3

S/107/61/000/010/003/007
D201/D304

RESM takes over planning

1 million (new) rubles per year. A plan for the transportation of flour from 30 flour mills to 350 towns and villages was produced for the ČSR, permitting savings of 32%. The same programming permits calculation of the best loading of public transportation. In Gor'kiy this permitted a decrease in the cost of public transportation by 31% and in bus parking space by 5%. The reduction of total mileage of public transportation in large towns by 1% results in savings of about 100,000 rubles per year. Comparison of preliminary experimental planning shows that savings in mileage could be increased to about 10%. There is 1 figure.

ASSOCIATION: Vychislitel'ny tsentr AN SSSR (Computer Center, AS USSR)

Card 3/3

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

B-II-1

Separation of ethyl acetate from products of catalytic dehydration of ethyl alcohol. E. A. BOBROVA, M. V. VELETOVA, and S. L. LELTSCHUK (Prom. Org. Chim., 1940, 7, 96—102).—The product of catalytic dehydration of EtOH (EtOAc 30—35, EtOH [illegible]—[illegible], AcOH 6—10, MeCHO 10—12, H_2O 4—8%) is fractionated, and 20% of H_2O is added to the fraction of b.p. 70—72°, which is then redistilled, to give an azeotrope containing EtOAc 83, EtOH 9, and H_2O 8% (b.p. 70·2°). The [H_2O] of the distillate is lowered to 1% by addition of the requisite amount of conc. aq. KOH. Aldehydes are removed from the product by treatment with NH_2OH or $NaHSO_3$. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

L 38554-66 EWT(m)/EWP(k)/T/EWP(e)/EWP(w)/EWP(v)/EWP(t)/ETI IJP(c) JD/HM/JG/

ACC NR: AT6012401 GD SOURCE CODE: UR/0000/65/000/000/0263/0268

AUTHORS: Borisova, Ye. A.; Gruzdeva, L. A.; Folomeyeva, M. A.; Shashenkova, I. I.

ORG: none

TITLE: Effects of small amounts of boron, beryllium and lanthanum on the properties of welded seams of titanium alloys

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 263-268

TOPIC TAGS: titanium alloy, metal welding, metal property, boron containing alloy, beryllium containing alloy, lanthanum containing alloy / VT-1 titanium alloy, OT4 titanium alloy, VT5 titanium alloy, VTZ-1 titanium alloy

ABSTRACT: The effects of small amounts of boron, beryllium and lanthanum on the mechanical properties and structure of titanium alloy welded seams were experimentally investigated on alloys VT1-1, OT4, and VT5. Butt-welded (argon-arc) 2-mm thick specimens were tested over a temperature range of 20--500C, and curves of tensile strength and bending angle (to test for plasticity) at failure are presented for different additives over this temperature range. Photographs of the welding seam microstructures for different amounts of the additives are also shown. It was found that: addition of up to 0.04% Be, 0.12% B, and 0.10% La had no effect on the mechanical

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L 38554-66

ACC NR: AT6012401

properties of the alloys over the temperature range 20--500C; addition of Be increases the yield strength of OT4 and VT5 welds without any effect on the plastic properties or on the microstructure; addition of up to 0.13% B modifies the structure of OT4 and VT5 welds and slightly increases strength but at decreased plasticity. The results justify further experiments on adding Be into welding rod alloys. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 11, 13/ SUBM DATE: 02Dec65/ ORIG REF: 003

Card 2/2

L 40165-66 EWT(m)/... (w)/... P(v)/T/... P(t)/ETI/... P(k) IJP(c) JD/...

ACC NR: AP6025085 SOURCE CODE: UR/0122/66/000/007/0056/0058

AUTHOR: Borisova, Ye. A. (Candidate of technical sciences); Shashenkova, I. I. (Engineer)

ORG: none

TITLE: Effect of hydrogen content on delayed failure of VT6S-alloy welds

SOURCE: Vestnik mashinostroyeniya, no. 7, 1966, 56-58

TOPIC TAGS: material failure, hydrogen, tensile strength, titanium alloy, aluminum containing alloy, vanadium containing alloy, hydrogen containing alloy, alloy weld, weld failure, delayed failure/VT6S titanium alloy

ABSTRACT: The effect of hydrogen on the susceptibility of VT6S titanium alloy (4.79% Al, 3.04% V, 0.13% Fe, 0.1% Si and 0.04% C) and alloy welds to delayed failure has been investigated. Disk-shaped 2-mm-thick solid and welded specimens containing 0.004%, 0.02%, or 0.03% H_2 were stress relieved at 750C and biaxially stressed in a special device under 25—50% of their breaking load (determined in short-term tests). Welded specimens containing 0.004% hydrogen (vacuum annealed) withstood 130 days under 50% load without cracking, except for one in which the first crack appeared after 54 days. Specimens with 0.03% H_2 failed in 3-4 days under a 25—50% load. Specimens of the parent metal exhibited similar behavior. No hydrides were detected in any of the investigated specimens regardless of their hydrogen content; their structure consisted of a mixture of $\alpha + \beta$ phase. Hydrogen increases the tensile strength of

Card 1/2 UDC: 621.791.052.4:669.295'788

L 40168-66

ACC NR: AP6025085

the alloy to 102.4 kg/mm^2 at 0.03% hydrogen, from 87.9 kg/mm^2 at 0.004% H_2. At the same time it substantially lowers the ductility of the weld, especially under biaxial stresses. Orig. art. has: 1 figure and 2 tables. [ND]

SUB CODE: 11 / SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001/ ATD PRESS: 5049

Card 2/2 MLP

BORISOVA, Ye.A.; TOLMACHEVA, A.V., redaktor; ROSLOV, G.I., tekhnicheskiy redaktor

[Technical and chemical control in public eating enterprises; textbook] Tekhno-khimicheskii kontrol' v predpriiatiiakh obshchestvennogo pitaniia; uchebnoe posobie dlia tekhnikumov. Moskva, Gos. izd-vo torgovoi lit-ry, 1955. 111 p. (MLRA 9:2)
(Food--Analysis)

BORISOVA, Yelizaveta Aleksandrovna; CHERVYAKOVA, L.S., red.; BRODSKIY, M.P., tekhn. red.

[Chemical control in public eating enterprises] Tekhnokhimicheskii kontrol' v predpriiatiiakh obshchestvennogo pitaniia. 2., perer. izd. Moskva, Gos. izd-vo torg. lit-ry, 1961. 143 p. (MIRA 14:11)
(Food--Analysis)

BORISOVA, YE.A.

PHASE I BOOK EXPLOITATION SOV/4508

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy, vyp. 3: Metallovedeniye titana (Titanium and Its Alloys, No. 3: Metal Science of Titanium) Moscow, Izd-vo AN SSSR, 1960, 161 p. Errata slip inserted. 2,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

Resp. Ed.: N.V. Ageyev, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: M.L. Polgoyetskiy; Tech. Ed.: Ye. V. Makuni.

PURPOSE: This collection of articles is intended for scientific research workers and metallurgical engineers.

COVERAGE: The articles summarize results of experimental studies of titanium-base alloys. The microstructure and mechanical properties of titanium-base alloys containing aluminum, chromium or other metals are analyzed along with the effect of oxygen, hydrogen and heat treatment on alloy structure and properties. The tendency of titanium alloys to embrittlement as a result of strain aging is emphasized, and the nitriding of titanium, carried out to increase the surface strength and wear resistance of titanium alloys, is described. Transformations occuring in commercial titanium under conditions of electric heating are examined. Attempts to develop titanium-base alloys capable of withstanding temperatures over 400°C are discussed as are problems of titanium-powder metallurgy and weldability of certain titanium-base alloys. No personalities are mentioned. Most of the articles have bibliographic references, the majority of which are Soviet.

TABLE OF CONTENTS:

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BORISOVA, YE. A.

PHASE I BOOK EXPLOITATION SOV/4508

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy, vyp. 3: Metallovedeniye titana (Titanium and Its Alloys, No. 3: Metal Science of Titanium) Moscow, Izd-vo AN SSSR, 1960, 161 p. Errata slip inserted. 2,700 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova.

Resp. Ed.: N.V. Ageyev, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: M.L. Podgoyetskiy; Tech. Ed.: Ye. V. Makuni.

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TABLE OF CONTENTS:

2/4

S/762/61/000/000/015/029

AUTHORS: Borisova, Ye.A., Ryzhov, V.S.

TITLE: Properties of the VT5-1 alloy as a function of the oxygen and hydrogen content.

SOURCE: Titan v promyshlennosti; sbornik statey. Ed. by S. G. Glazunov. Moscow, 1961, 160-167.

TEXT: The VT5-1 (Ti-(4-5.5)Al-(2-3)Sn) is a one-phase alloy characterized by excellent weldability, high creep strength at above 400°C, and good thermal stability (ThSt), i.e., low-T strength after high-T aging. Typical mechanical properties are tabulated, including high-temperature (HT) E and stress-rupture characteristics. An experimental determination of the effects of O and H on the properties of the VT5-1 alloy leads to the following conclusions: With increasing O content, the tensile-strength and yield limits increase, but the ductility characteristics, namely, the elongation, the necking, the notch toughness, and the bend angle of sheet material decrease (graph). Ductility decreases steeply with O contents beyond 2%. Notch toughness (NT) decreases by appx. 2-3 kgm/cm^2 per 0.1% O. Yet, at 700°C an increase in O content engenders an increase in elongation and necking, hence, hot and warm working is not impaired by increasing O content. Tests made after 500 hrs at 450-550°C showed that up to 0.1% O content does not impair the ThSt throughout the full range of test T's. An O content of 0.35% leads to a sharp decrease in plasticity after 450-500° aging. Thus, a 0.1-0.15% O content is advisable for VT5-1 parts

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designed for long-term service (more than 500 hrs). Low-T tests at -70 and -196° C indicated an even decrease in notch-toughness regardless of O content in comparison with their respective values at 20°, at which an increasing O content results in appreciable losses in notch toughness. Hence, the absolute notch-toughness values at extremely low T are also substantially depressed by high O contents. Desirable O contents for low-T work are 0.1-0.15%. A considerable effect of the structure of a specimen on the plasticity of the alloy at low T was noted. Equiaxial polyhedral structure, as that obtained after full recrystallization anneal or quenching at T's close to the $\alpha \rightarrow \alpha+\beta$ temperature, enhances the elongation and necking at 196° (as compared with their values at +20°) more effectively than do structures with jagged grain boundaries, characteristic of metal after hot deformation and incomplete anneal. The same applies to notch toughness, but not to the HT characteristics. H affects the embrittlement of VT5-1 alloy less than that of technically pure Ti. With increasing H content, the tensile strength increases; the plasticity characteristics are not appreciably affected up to 0.025% H at standard testing rates. Greater H contents and faster testing rates increase brittleness significantly. Low-T characteristics vary sharply: At-196°C specimens with 0.013% H had approximately the same plasticity as those without H, but specimens with 0.017% H exhibited brittle fracture. Alloys for low-T operation should, therefore, contain less than 0.01% H. The bend angle is not affected appreciably by H contents up to 0.05%, provided the distribution is uniform throughout the specimen. However, it is noted

that surface etching of sheets in acids leads to an objectionable concentration of H in the surface layers and, hence, to a lowering of the surface plasticity. Notch toughness is affected most adversely by H content, with a sharp drop-off at 20°C with H contents from 0.004% to 0.01%, a shallower drop-off to 0.05%, and a renewed steepening with yet larger H contents. Heat treatment: The single-phase nature of the VT5-1 alloy renders a softening anneal to remove surface strain hardening the only sensible form of heat treatment. 1-hr anneal at up to 700° is practically ineffective in any way. T's up to 800° reduce the tensile strength and increase the plasticity somewhat. Further T increase from 800-1,200° does not affect the strength, creep, and elongation, but reduces necking slightly. Longer soaking at annealing T (3-5 hrs) does not change the effects of 500-900° anneal, but reduces the plasticity parameters after 1,100-1,200° anneal through a significant growth of the grain size. Elongation is significantly increased by water cooling from 900-950°C. 400° tempering of specimens quenched in water from 900° did not affect their properties appreciably. Higher tempering T's (400-800°) increased the tensile strength and reduced elongation, but the level of post-anneal properties was not achieved. The quench T required to achieve an increased plasticity had to be increased with increasing O content. The nature of this mechanism is not clear. There are 10 figures and 3 tables; no references.

ASSOCIATION: None given.

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S/762/61/000/000/016/029

AUTHORS: Borisova, Ye.A., Shashenkova, I.I.

TITLE: The heat treatment of the BT6 (VT6) alloy.

SOURCE: Titan v promyshlennosti; sbornik statey. Ed. by S. G. Glazunov. Moscow, 1961, 170-175.

TEXT: The BT6 (VT6) alloy is a formable two-phase ($\alpha+\beta$) alloy of the Ti-Al-V system with 5-6.5% Al and 3.5-4.5% V. The relatively small content of β phase renders it amenable to heat treatment, which may increase its tensile strength by 15-25% in comparison with its initial state after anneal. The precise quench and aging schedule depends on the operational requirements of the part. In sheet material, for example, the pre-quench T is limited to 850°C by the appreciable oxidation occurring at high T. The tensile strength attainable is tabulated versus quench T and aging T. The quench T affects the yield limit of the alloy significantly and expands the $\sigma_b-\sigma_{0.2}$ difference from the usual value of Ti alloys (5-7 kg/mm^2) to 15-20 kg/mm^2. This effect, which favors the formability of sheet material, is reduced to its normal value by aging. Inasmuch as the depth penetration of the quench-hardening is limited, rods with a diameter greater than 25-30 mm do not undergo hardening penetration to the core. Hence, parts intended for hardening should be first roughed down by machine tool, then quench-hardened, and lastly finished by removal of the gas-contaminated surface layer. The final results of the heat treatment are also affected by the type of structure of the initial material and by its content of gaseous

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admixture and, more especially, O. Depending on the T history of the hot forging and the degree of final deformation, the microstructure of the semifinished piece may exhibit either an equiaxial ($\alpha+\beta$) structure or an acicular structure with sharply defined initial-β-phase grain boundaries. The second type has lower plasticity-characteristic values, especially necking (full-page tabular comparison). The differences become most pronounced upon heat treatment consisting of quench and aging. Specimens forged in the ($\alpha+\beta$) region, at 950-800°C, have better plasticity than those forged in the β region, at 1,200-1,050°. An increasing O content (tested up to 0.25%) improves the tensile strength and yield limit and reduces the plasticity, especially the necking and the notch toughness. The increase in strength extends to high T and applies both to short-duration and to stress-rupture tests. O is most effective on the post-heat-treatment properties of the alloy. An optimal compromise between strength and plasticity is achieved with no more than 0.2% O. The VT6 alloy excels by its elevated thermal stability, which is not impaired by the heat treatment. However, operation in excess of 100 hrs must be held to T's lower than the aging T. There are 6 figures and 3 tables; no references.

ASSOCIATION: None given.

BORISOVA, Ye.A.; BARDANOV, K.V.

Ignition of titanium alloys in oxygen-containing atmospheres.
Metalloved. i term. obr. met. no.2:37-40 F '63. (MIRA 16:3)
(Titanium alloys--Combustion)

L 16646-65 EWT(m)/EWP(w)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(b) Pf-4
IJP(c)/ASD(m)-3/AFETR MJW/JD/HM

ACCESSION NR: AP5000164 S/0032/64/030/012/1504/1505

AUTHORS: Borisova, Ye. A.; Shashenkova, I. I.

TITLE: A method of determining the tendency toward crack formation under prolonged loading for sheet titanium alloys

SOURCE: Zavodskaya laboratoriya, v. 30, no. 12, 1964, 1504-1505

TOPIC TAGS: titanium alloy, weld, arc welding, metal binding, crack formation / Gagarin press, VT 14 alloy

ABSTRACT: A method for determining the tendency toward crack formation in a welded structure of titanium alloys exposed to prolonged loading is described. The method is based on prolonged deflection from the planar stressed state and on determination of the time lapsed before crack appearance. Loads were applied by means of a screw-clamp device as shown in a photograph. Specimens were prepared from two plates of 64 mm diameter, up to 2.5 mm in thickness, and butt-welded by argon arc welding. Deflections were measured with a micrometer depthmeter accurate to 0.01 mm. The tests proceeded as follows: specimens were loaded by means of a standard Gagarin press, starting with a zero load which increased until failure load was reached; measurements of deflection were made as the load

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L 16646-65
ACCESSION NR: AP5000164

increased, and the resulting load-deflection curve was plotted (See Fig. 1 on the Enclosure). Then similar specimens were loaded so as to produce a sag deflection which was increased in 0.25-mm increments. After each sag increment the specimen was examined for crack formation with a binocular microscope. If no cracks were detected, the sag was increased 0.25 mm and the specimen was reexamined. When cracks were detected, the corresponding load producing the given sag was determined from the plot (Fig. 1). The method described was tested on specimens made from alloy VT-14 under various temperature conditions. S. M. Smirnova (technician) participated in the tests. Orig. art. has: 2 figures.

ASSOCIATION: none

ENCL: 01

SUBMITTED: 00

SUB CODE: MM NO REF SOV: 000 OTHER: 000

Card 2/3

L 16646-65
ACCESSION NR: AP5000164

ENCLOSURE: 01

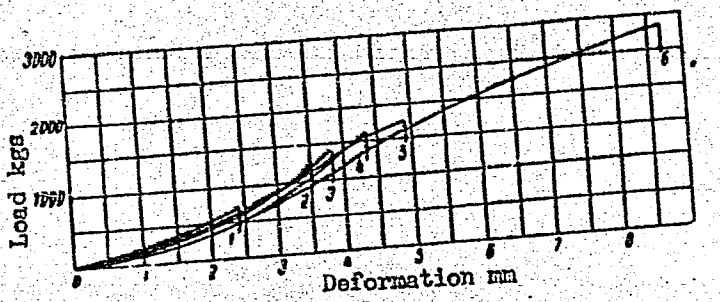

Fig. 1. Deflection curves of standard welded disk specimens under tests on a Gagarin press. Numbers of curves (1-6) correspond to specimens undergoing various heat treatment conditions.

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L 57510-65 EWG(j)/EWT(m)/EWP(w)/EPF(c)/EWA(d)/EPR/T/EWP(t)/EWP(b)/EWA(c) Pr-4/
ACCESSION NR: AP5013154 Ps-4 IJP(c) JD/JG UR/0129/65/000/005/0029/0032
669.295:669.787

AUTHOR: Borisova, Ye. A.; Klimova, G. S.

TITLE: The effect of impurities and structure on the linear expansion coefficient of commercial Ti

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 5, 1965, 29-32

TOPIC TAGS: titanium, metal physical property, coefficient of thermal expansion

ABSTRACT: Ingots were cast from commercially pure Ti and alloyed with Fe, Cr, C, and O. The linear expansion coefficient, α_l, was then determined by a special dilatometer. No change in α_l was noted within the accuracy of the experiment, when alloying elements, including C and O_2 were added. The measurements were made over a wide range of temperatures (20-800°C). Changes in grain size were studied for annealing temperatures at and below 900°C. Both very large and very small grain sizes were obtained by varying the time of annealing. The large grains had the greatest effect in increasing α_l in the experimental temperature range. Small grain

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L 57510-65

ACCESSION NR: AP5013154

size thus results in greater stabilization of α_2 in Ti. Various treatments in the α and β regions were followed by microstructural analysis and α_2 determinations. However, this resulted in a coarse grain structure, and the influences noted above took effect. The results do show some reduction in the expansion coefficient due to the microstructure. Finally, the authors consider the effects of cold deformation (26-53%) on the value of α_2. In the temperature range of 20-100°C, α_2 was raised from 8.29×10^{-6} to 10.2×10^{-6} by cold deformation to 53%. Orig. art. has: 3 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 000 OTHER: 000

Card 2/2

L 9651-66 EWT(m)/EWA(d)/EWP(t)/EWP(z)/EWP(b) LIP(c) MJW/JD

ACC NR: AP5027604 SOURCE CODE: UR/0135/65/000/011/0027/0029

AUTHOR: Borisova, Ye. A. (Candidate of technical sciences); Shashenkova, I. I. (Engineer); Gruzdeva, L. A. (Engineer)

ORG: none

TITLE: Resistance of welded joints of VT14 titanium alloy to cracking under prolonged load

SOURCE: Svarochnoye proizvodstvo, no. 11, 1965, 27-29

TOPIC TAGS: crack formation, titanium alloy, static load test, annealing / VT14 titanium alloy

ABSTRACT: The use of titanium alloys to manufacture products performing under high pressure raises the question of their long-time reliability. So far, the pertinent conditions have been simulated in the laboratory by subjecting specimens to an uniaxially stressed state, whereas under real conditions the alloys exist in a complex-stressed state. To remedy this gap, the proneness of titanium alloys to eventual fracture was investigated by means of a specially developed method simulating the plane stressed state. The method consists in determining the time (in days) until the appearance of cracks in welded washers subjected to a constant load in a special device (Fig. 1). The welded washers investigated were made of VT14 titanium alloy

Card 1/3 UDC: 621.791.011:669.295.5

L 9651-66

ACC NR: AP5027604

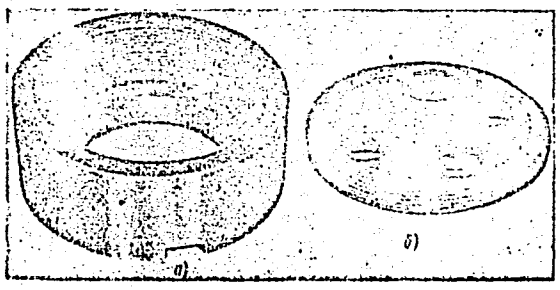

Fig. 1. Device for long-time loading of washers:

a - housing; b - lid. The loading of the specimen (washer) is produced by the projecting edge of the lid as it is screwed into the housing

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ACC NR: AP5027604

(3.88% Al, 3.02% Mo, 1.02% V, 0,015% H_2, 0.08% O_2, 0.02% N_2). The effect of annealing on cracking under prolonged load was also investigated by first heating some of the washers in an air-atmosphere furnace at 800°C for 15 min and cooling them in air. The loaded specimens periodically examined under a microscope with a magnification of 16-56 times in order to detect any cracks. Findings: no cracks were observed during the first 180 days of loading in the annealed and non-annealed specimens subjected to a load equal to 25% of the breaking load (P = 450 and 725 kg, respectively, for annealed and non-annealed specimens). When the load was raised to 50% of the breaking load, however, a large number of cracks appeared along grain boundaries in the unannealed specimens. Thus, annealing has a beneficial effect on the welded joints of VT14 titanium alloy exposed to prolonged loading. It is also established that the gas-saturated layer forming on the surface of specimens of VT14 alloy during their heating at aging temperatures leads to the premature cracking of the welded joint under prolonged loading. Hence, the author recommends eliminating this gas-contaminated layer by sandblasting with subsequent pickling or by other methods.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 000

Card 3/3

BORISOVA, Ye. G. Cand Geolog--Mineralog Sci

Dissertation: "Investigation of Interaction Between Grounds and Lime." 2/2/50

Moscow Order of Lenin State V imeni M. V. Lomonosov.

SO Vecheryaya Moskva
Sum 71

BORISOVA, Yelizaveta Grigor'yevna; MOROZOV, S.S., professor, redaktor; GERBURT-GEYBOVICH, A.V., redaktor; MOTORINA, I.A., tekhnicheskiy redaktor

[Principles of a methodology for laboratory research on artificial soil stabilization] Osnovy metodiki laboratornykh issledovanii pri iskusstvennom ukreplenii gruntov. Pod red. S.S.Morozova. [Moskva] Izd-vo Moskovskogo universiteta, 1954. 247 p. [Microfilm] (MLRA 8:3)
(Soil stabilization)

BORISOVA, Ye.G.

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1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo universiteta.
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POPOV, I.V.; BORISOVA, Ye .G.

Relationship between water and clay rocks at the initial stage of the washout. Vest.Mosk.un.Ser.4: Geol. 15 no.1:51-59 '60. (MIRA 14:4)

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PROCESSES AND PROPERTIES INDEX

CA 11 H

Effect of potassium chloride on the pacemaker of the frog heart. E. I. Borisova and V. S. Rusinov (Botkin Hospital, Moscow). *Byull. Eksptl. Biol.* (U.S.S.R.) 11, 88–91(1941).—The sinus venosus was covered with a piece of filter paper satd. with KCl soln., 2% to 0.5 *N*, and cardiogram was taken. The initial effect was slowing of the rate; repeated applications subsequently caused an increase. Application during the long diastole caused by KCl led to a series of new contractions. There is a definite indication of de-synchronization of the two halves of the heart, as indicated by resolution of the single ventricular complexes into twinned peaks. Removal of the filter paper and washing of the heart in Ringer soln. caused disappearance of desynchronization. The results may be connected with the known effect of excessive KCl on the human cardiogram; the T-wave increases significantly.

O. M. Kosolapoff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BORISOVA, Ye.I., kand. geograf. nauk; BLINNIKOVA, Z.G.

Weather forecast for the U.S.S.R. in January 1965. Meteor. i gidrol. no.1:69-72 Ja '65. (MIRA 18:2)

1. TSentral'nyy institut prognozov.

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Potentials of local stimulation of the heart and the phenomenon of shortening of the P-R interval with simultaneous amplification of the RS-complex. Klin. med., Moskva 30 no. 4:38-42 Apr. 1952. (CLML 22:2)

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Effect of the inhalation of hydrogen sulfide contained in the air in Talgi health resort on body reactivity. Vop.kur.fizioter. i lech. fiz.kul't. 22 no.6:33-39 N-D '57. (MIRA 11:2)

1. Iz kafedry patologicheskoy fiziologii Dagestanskogo meditsinskogo instituta (zav. kafedroy - prof. F.M.Suponitskaya)
(TALGI--MINERAL WATERS) (HYDROGEN SULFIDE)

AKHMEDOV, A., red.; BORISOVA, Ye.I., red.; MEREDOV, P., tekhn. red.

[From the work practice of chemistry and biology teachers] Iz opyta raboty uchitelei khimii i biologii. Ashkhabad, Turkmenskoe gos. uchebno-pedagog.izd-vo, 1961. 21 p. (MIRA 15:1)

1. Respublikanskiy institut usovershenstvovaniya uchiteley.
(Chemistry—Study and teaching)
(Biology—Study and teaching)

5.6-2 551.509.33

[Blumina, L. I.] Sinopticheskie usloviia ekstremal'no-teplykh i ekstremal'no-kholodnykh sinopticheskikh sezonov vesny na evropeiskoi territorii Soiuza SSR. [Synoptic conditions during extremely warm and extremely cold synoptic spring seasons in European U.S.S.R.] *Leningrad, Tsentral'nyi Institut Prognozov, Trudy*, 11(26), 29, 1949. 13 figs., 18 tables. Also: Kist, M. IA. Sinopticheskie usloviia ekstremal'no-teplykh i ekstremal'no-kholodnykh letnikh sinopticheskikh sezonov na evropeiskoi territorii Soiuza SSR. [Synoptic conditions of extremely warm and extremely cold synoptic summer seasons in European U.S.S.R.] *Ibid.*, p. 30-85. 24 figs., 16 tables. And: Shishkov, V. G. Sinopticheskie usloviia ekstremal'no-kholodnykh i ekstremal'no-teplykh sinopticheskikh sezonov oseni na evropeiskoi territorii Soiuza SSR. [Synoptic conditions of extremely cold and extremely warm synoptic autumn seasons in European U.S.S.R.] *Ibid.*, p. 86-109. 10 figs., 13 tables. And: Tsepkanova, E. I. Sinopticheskie usloviia ekstremal'no-teplykh i ekstremal'no-kholodnykh sinopticheskikh sezonov zimy na evropeiskoi territorii Soiuza SSR. [Synoptic conditions of extremely cold and extremely warm synoptic winter seasons in European U.S.S.R.] *Ibid.*, p. 110-134. 12 figs., 15 tables. And: Borisova, E. L. Sinopticheskie usloviia extremal'no-kholodnykh i extremal'no-teplykh sinopticheskikh sezonov zimy na evropeiskoi territorii Soiuza SSR. [Synoptic conditions of extremely cold and extremely warm synoptic winter seasons in European U.S.S.R.] *Ibid.*, p. 135-161. 15 figs., 8 tables. DLC—These five studies were prepared for improvement of seasonal long range forecasts. Synoptic maps for the period 1891-1947 were used for this investigation as well as climatic data for the same period and also charts of baric topography, especially for the 500 mb level for the period 1938-1948. All seasons, when anomalies of temperature were not less than ±2°C were considered as extremely warm and cold. The studies present an analysis of the synoptic situation which preceded the anomalies and give descriptions of climatic conditions during the period of the anomalies. Many specific situations are shown on maps. Tables of frequency of cases and practical principles for forecasting thermal seasonal anomalies are given in each study. L. I. BLUMINA established that cold invasions during warm springs are observed over European U.S.S.R. not more than 1 to 3 times per season and usually do not penetrate into the southern regions. But during a cold spring these cold waves return about 4 to 7 times and invade up to 2 to 5 times the southern and southeastern parts of the territory. Surplus amount of precipitation is observed in the western part during warm springs and in the eastern part during cold springs. Deficiency of precipitation is observed during cold springs in the western and during warm springs in the eastern part of European U.S.S.R. The study made by M. IA. Kist classifies peculiarities of synoptic processes preceding the summer shows that the types of synoptic processes before warm and cold summer anomalies are very different, and the

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Recurrence of certain types of stationary anticyclones. Trudy TSIP no.56:31-70 '57. (MLRA 10:8)
(Cyclones)

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Automatic measurement of cooking liquid level in a digester. Bum. prom. 36 no.7:19-20 Jl '61. (MIRA 14:9)

1. Priozerskiy tsellyuloznyy zavod.
(Woodpulp industry--Equipment and supplies)
(Liquid level indicators)

BORISOVA, Ye.I.

Anomaly of mean monthly air temperature during winter months in the European part of the U.S.S.R. and Western Siberia as related to the characteristics of synoptic processes. Trudy TSIP no.71: 48-77 '58. (MIRA 11:12)

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BORISOV, Ye.I.

Forecasting the mean monthly temperature anomaly for January and February in the European part of the U.S.S.R. and Western Siberia. Trudy TSIP no.89:3-22 '60. (MIRA 14:3)
(Weather forecasting)